

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/15308

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :A61K 38/00, 38/16; C07K 14/00

US CL :514/2.13 ; 530/300, 326

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 514/2.13 ; 530/300, 326

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

APS, STN. FILE REGISTRY SEQUENCE SEARCH.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- A	HIDER et al. A Comparative Structural Study Of Apamin And Related Bee Venom Peptides. Biochimica Biophysica Acta. 1981, Vol. 667, pages 197-208, see entire article.	7 --- 1, 8

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
A document defining the general state of the art which is not considered to be of particular relevance	*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
E earlier document published on or after the international filing date	*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*G* document member of the same patent family
O document referring to an oral disclosure, use, exhibition or other means	
P document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search
14 OCTOBER 1999

Date of mailing of the international search report
03 NOV 1999

Name and mailing address of the ISA/US
Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231
Facsimile No. (703) 305-3230

Authorized officer

BENNETT CELSA

Telephone No. (703) 308-0196

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/15308

BOX II. OBSERVATIONS WHERE UNITY OF INVENTION WAS LACKING

This ISA found multiple inventions as follows:

This application contains the following inventions or groups of inventions which are not so linked as to form a single inventive concept under PCT Rule 13.1. In order for all inventions to be searched, the appropriate additional search fees must be paid.

Group I, claims 1, 7 and 8, drawn to a "tertiapin-like alpha helix compound and composition (e.g. pharmaceutical) thereof.

Group II, claims 2-4, drawn to first method (e.g. in vivo) of using a "tertiapin-like alpha helix compound" to inhibit the activity of inward-rectifier potassium channels.

Group III, claim 5, drawn to a second method (e.g. in vivo) of use of a "tertiapin-like alpha helix compound" to identify compounds.

Group IV, claim 6, drawn to a third method (e.g. in vitro) of use of a "tertiapin-like alpha helix compound" to identify compounds.

Group V, claim 9, drawn to a fourth method (e.g. in vivo) of use of a "tertiapin-like alpha helix compound" to control insulin secretion.

Group VI, claim 10, drawn to a fifth method (e.g. in vivo) of use of a "tertiapin-like alpha helix compound" to control cardiac rhythm and electrical conduction.

Group VII, claim 11, drawn to a sixth method (e.g. in vivo) of use of a "tertiapin-like alpha helix compound" to induce diuresis.

Group VIII, claim 12, drawn to a seventh method (e.g. in vivo) of use of a "tertiapin-like alpha helix compound" to modulate neurotransmission.

Group IX, claims 13-14, drawn to a ninth method (e.g. in vivo) of use of a "tertiapin-like alpha helix compound" to rationally design drugs.

The inventions listed as Groups I to IX do not relate to a single inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: pharmaceutically active tertiapin-like alpha helix compounds are known in the art. E.g. See Hider et al., *Biochimica Biophysica Acta*, Vol. 667, (1981) pages 197-208. Accordingly, there is no special technical feature which links the compounds and compositions to their methods of use.

Additionally, the methods of Groups II-IX lack a special technical feature (e.g. the compound is known) and further the methods address different objectives and/or utilize different protocols and method step(s) so as to constitute distinctly different methods.